

Mr. Lee D. Allen, P.E.  
Northeast Civil Solutions

from building foundations and provide the minimum soil cover for protection of foundation subgrades from frost penetration.

A two-dimensional global slope stability analysis was performed for the Site from selected interpreted soil profiles that included proposed site grades and fills areas overlying the existing fill, organic, and clay subsoil layers. These analyses included both Bishop Modified and Ordinary Method of Slices calculations. Based on these calculations, the proposed embankments and fills have suitable factors of safety from rotational slope failure of the underlying clay and organic fills.

#### Construction Quality Control

The geotechnical engineer should be provided the opportunity to review the final design and specifications to ensure recommendations presented herein have been properly interpreted and applied. It is recommended that all backfill and compaction be inspected and tested by a qualified firm to ascertain that the proper materials are placed and adequately compacted. The geotechnical engineer should review all soil inspection and testing reports and monitor site development and foundation subgrade preparation to determine the necessity for additional cut and backfill beneath building subgrades. The geotechnical engineer should also review the contractor's subgrade settlement survey and monitoring program during the placement of fill and, on the basis of this survey, determine the time-rate of settlement and recommended sequence for installation of structures, utilities, and pavements in Area 3.

#### **CLOSURE**

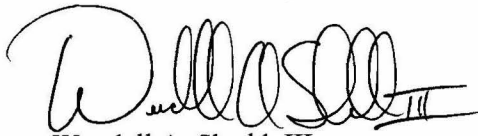
This report has been prepared to assist the Site and structural engineers in the design and construction of foundations, pavements, and Site structures related to the proposed development at 7 to 13 Depot Street, South Windham, Maine. The recommendations have been presented on the basis of an understanding of the project as described herein, and through the application of generally accepted foundation engineering practices. No other warranties, expressed or implied, are made.

Mr. Lee D. Allen, P.E.  
Northeast Civil Solutions

We have enjoyed working with you on this phase of your project. Further investigations recommended in this report may be provided upon your request and written authorization. Should you have any questions regarding this report or require additional assistance, please do not hesitate to call.

Sincerely,

OAK ENGINEERS, LLC.

  
Wendell A. Shedd, III  
Senior Geotechnical Engineer



Paul D. DeStefano, Ph.D., P.E.  
Director, Geotechnical and Structural Services

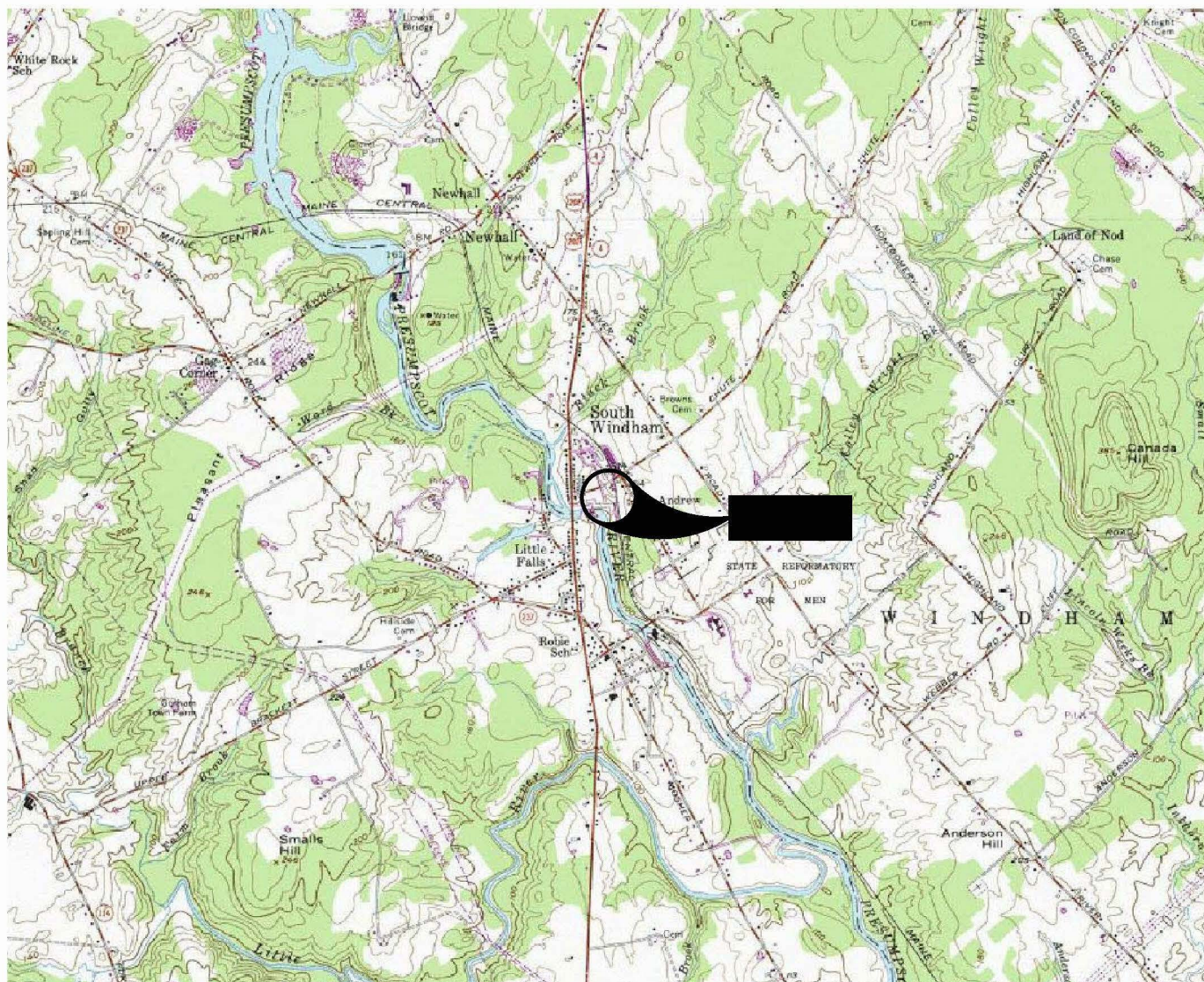
WAS/PDD:ss  
Attachments

cc: Steve Etzel, Questor, Inc.

## **ATTACHMENT A**

### **Figures**

Geotechnical Investigation  
Village at Little Falls, LLC  
7 to 13 Depot Street  
South Windham, Maine

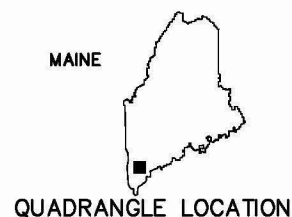


TAKEN FROM U.S.G.S. 7.5x15 MINUTE SERIES TOPOGRAPHIC MAP OF GORHAM, MAINE-1957 (REVISED 1975).

CONTOUR INTERVAL IS 20 FEET

SITE COORDINATES: LATITUDE 43°44'06"  
LONGITUDE 70°25'25"

UTM COORDINATES: 48: 43: 421mN  
3: 85: 345mE



SCALE in FEET  
1: 25,000

**OAK**  
ENGINEERS

Brown's Wharf  
Newburyport, MA 01950  
(978) 465-9877

PREPARED FOR:  
NORTHEAST CIVIL SOLUTIONS  
153 U.S. ROUTE 1  
SCARBOROUGH, MAINE

DATE: FEBRUARY 26, 2007

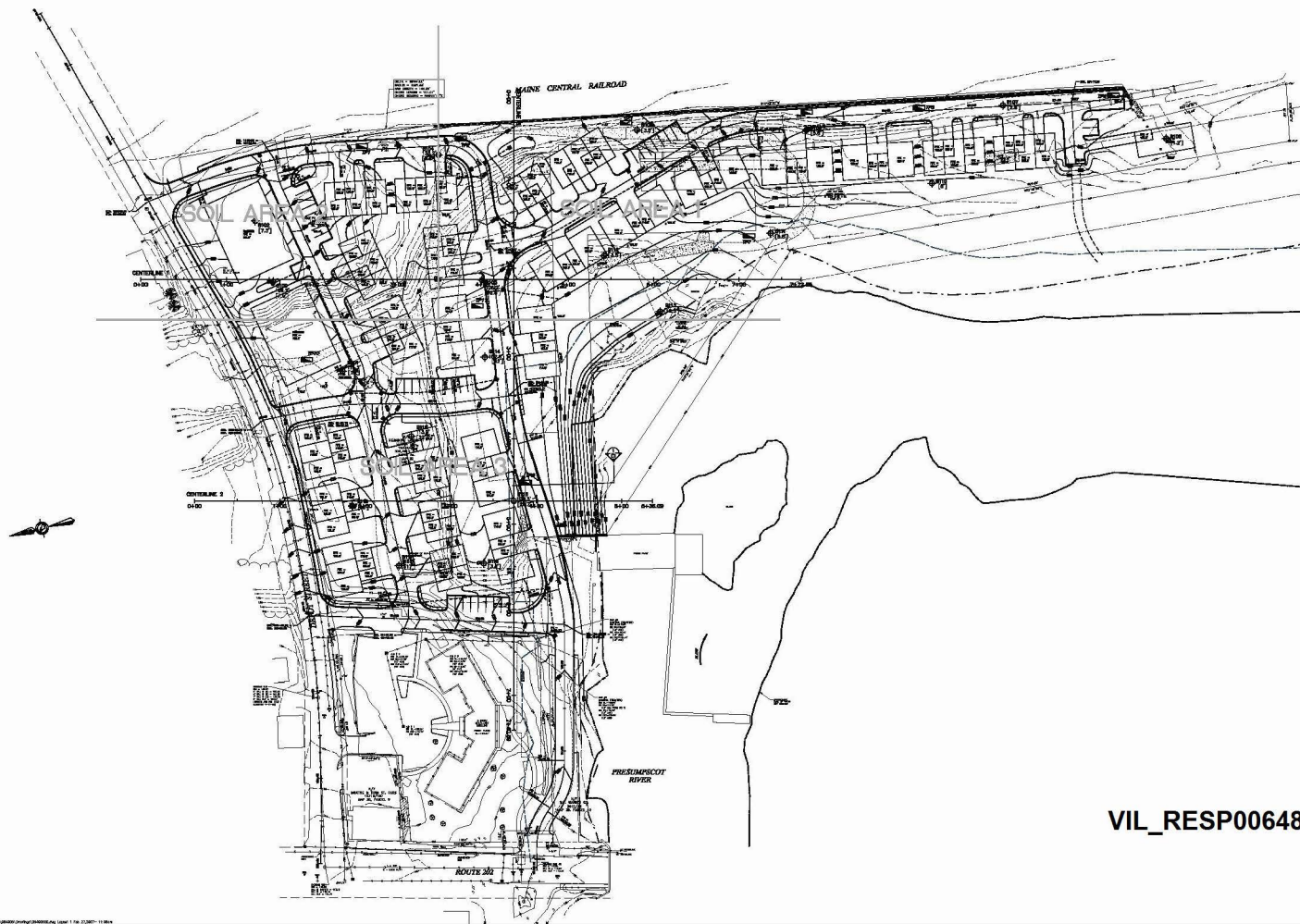
PROJECT: 064006

FIGURE: 1

SITE:

VILLAGE AT LITTLE FALLS  
13 DEPOT STREET  
SOUTH WINDHAM, MAINE

VIL\_RESP00647



**VILLAGE AT  
LITTLE FALLS**

13 DUPONT STREET  
NORTHAMPTON, MA 01060

Project No:

NORTHAMPTON CIVIL SOLUTIONS  
135 US ROUTE 1  
BOARDBOOTH, ME 05624

SCALE: 1" = 100'  
1" = 50'

**OAK**  
ENGINEERS

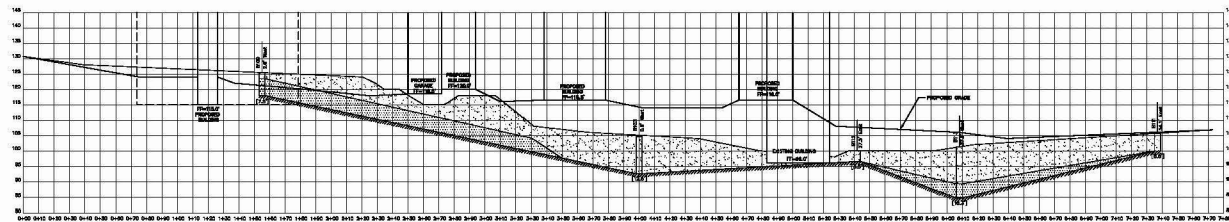
Branch Office  
Northampton, MA 01060  
Tel: (413) 453-8877  
Fax: (413) 453-8888  
www.oakengineers.com

**SITE PLAN**

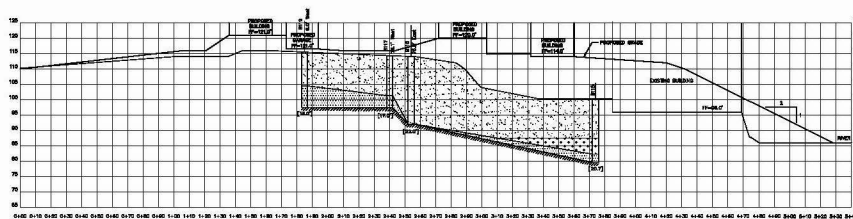

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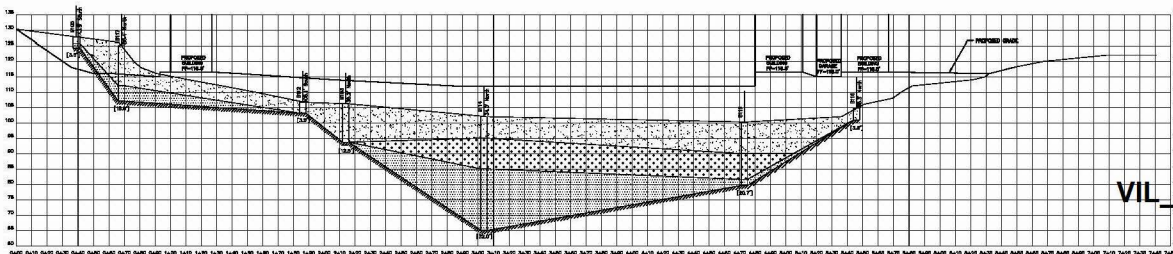
C1



PROFILE 1







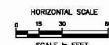
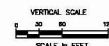
PROFILE 2



PROFILE 3

# LEGEND

-  APPARENT BEDROCK
-  SILTY SAND/FILL
-  CLAY/SILT
-  ORGANICS



## APPARENT SUBSURFACE PROFILES

No.	Revision/Issue	Date
1	Initial	POD
2	Revised	POD
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VIL RESP00649

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**ATTACHMENT B**

Soil Boring and Test Pit Logs

Geotechnical Investigation  
Village at Little Falls, LLC  
7 to 13 Depot Street  
South Windham, Maine

**BORING LOG:****B101**

Ground Elevation:	See Plan	Total Depth:	23 Feet	Logged By:	WAS
GW encountered:	Feet	Boring Diameter:	6 Inches	Date Drilled:	1/24/07 to 1/24/07
GW @ completion:	N.M. Feet	Well Stickup:	0	Driller:	Northern Test Boring

DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Black to Dark Brown f-c SAND, little Silt, trace Gravel	dry to moist		SS-1	8,3 3,3	24/12	SM	6	
	(loose)	moist		SS-2	2,3 3,3	24/16	SM	6	
5	Olive CLAY, some silt, trace fine Sand, slightly plastic to plastic	moist - PP = 2.5 tsf		SS-3	2,2 3,3	24/20	CL	4	
		moist - w = 27.2%		SS-4	4,3 3,5	24/24	CL	6	
		moist		SS-5	3,4 4,4	24/24	CL	8	
10		moist to wet		SS-6	4,4 5,5	24/24	CL	9	
15		wet		SS-7	3,3 3,3	24/24	CL	6	
20		wet		SS-8	4,8 12,18	24/24	CL	20	
	(stiff to medium)								
25	Auger Refusal - End of Boring @ 23'								
30									
35									

**NOTES:**

1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA)
2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).

**CLIENT:**

Northeast Civil Solutions

**SITE:**

Village at Little Falls  
7 to 13 Depot Street  
South Windham, Maine

**VIL\_RESP00651**

Project No.: 064006

Page: 1

**BORING LOG:****B102**

Ground Elevation:	See Plan	Total Depth:	7.3 Feet	Logged By:	WAS
GW encountered:	N.O. Feet	Boring Diameter:	6 Inches	Date Drilled:	1/24/07 to 1/24/07
GW @ completion:	N.M. Feet	Well Stickup:	0	Driller:	Northern Test Boring

DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Gray to Brown f-c SAND, some Gravel, little Silt (loose)	dry to moist		SS-1	24,14 9,3	24/15	SM	23	
	Olive SILT, some Clay, trace fine Sand, slightly plastic to plastic	moist		SS-2	2,3 2,3	24/17	ML	5	
5		moist - w = 26.2%		SS-3	2,3 5,5	24/20	ML	8	
	(stiff to medium)	moist - weathered shale pieces in spoon		SS-4	5,10 50/3"	15/10	ML	>100	
	Auger and Split Spoon Refusal - End of Boring @ 7.3'								
10									
15									
20									
25									
30									
35									

**NOTES:**

1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA)
2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).

**CLIENT:**

Northeast Civil Solutions

**SITE:**

Village at Little Falls

7 to 13 Depot Street  
South Windham, Maine**VIL RESP00652**

Project No.:

064006

Page:

1

**BORING LOG:****B103**

Ground Elevation:	See Plan	Total Depth:	12.5 Feet	Logged By:	WAS
GW encountered:	11 Feet	Boring Diameter:	6 Inches	Date Drilled:	1/24/07 to 1/24/07
GW @ completion:	N.M. Feet	Well Stickup:	0	Driller:	Northern Test Boring

DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Topsoil	dry to moist		SS-1	4,4 50/4"	16/6	SM- ML	>100	
	Olive Brown SILT and fine SAND	moist - kerosene odor		SS-2	4,7 15,17	24/7	SM- ML	22	
5	becoming Dark Brown to Black	moist - wood pieces		SS-3	4,5 6,9	24/8	SM- ML	11	
	becoming Olive Brown with trace fine Gravel (firm)	moist		SS-4	7,9 5,4	24/7	SM- ML	14	
10	Light Brown f-m SAND and Gravel, little Silt	moist - coal pieces - w = 12.5%		SS-5	4,5 3,3	24/8	GM- SM	8	
	(loose)	wet		SS-6	2,2 3,1	24/12	GM- SM	5	
	Auger Refusal - End of Boring @ 12.5'								
15									
20									
25									
30									
35									

**NOTES:**

1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA)
2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).

**CLIENT:**

Northeast Civil Solutions

**SITE:**





Village at Little Falls  
7 to 13 Depot Street  
South Windham, Maine




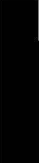
**VIL RESP00653**

Project No.: 064006

Page:

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		<b>BORING LOG:</b>		<b>B104</b>					
		Ground Elevation: See Plan		Total Depth: 9 Feet		Logged By: WAS			
		GW encountered: N.O. Feet		Boring Diameter: 6 Inches		Date Drilled: 1/24/07 to 1/24/07			
		GW @ completion: N.M. Feet		Well Stickup: 0		Driller: Northern Test Boring			
DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Black f-m SAND, some Silt (loose)	dry to moist - brick and coal ash		SS-1	8,7	24/21	SM	14	
	Olive SILT and fine SAND, trace Gravel (firm) Auger Refusal on weathered rock	moist - shaley rock pieces in spoon		SS-2	7,6 4,5 18,50/ 4"	24/10	ML	23	
5		RQD = 68.3%		RC-1		60/60			
10	End of Boring @ 9'								
15									
20									
25									
30									
35									
<b>NOTES:</b> 1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA) 2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).			<b>CLIENT:</b> Northeast Civil Solutions  <b>SITE:</b> Village at Little Falls 7 to 13 Depot Street South Windham, Maine						
			Project No.: 064006		Page: 1		<b>VIL_RESP00654</b>		

		<b>BORING LOG: B105</b>							
		Ground Elevation: See Plan		Total Depth: 9 Feet		Logged By: WAS			
		GW encountered: N.O. Feet		Boring Diameter: 6 Inches		Date Drilled: 1/24/07 to 1/24/07			
		GW @ completion: N.M. Feet		Well Stickup: 0		Driller: Northern Test Boring			
DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Dark Gray to Black f-m SAND, some Silt (loose)	dry to moist - brick pieces		SS-1	22, 17 7, 7	24/22	SM	24	
	Olive SILT, trace fine SAND, trace Gravel (firm) Auger Refusal on weathered rock	moist - w = 24.7%		SS-2	5, 7 9, 50/3"	21/17	ML	16	
5		RQD = 73.3%		RC-1		60/60			
10	End of Boring @ 9'								
15									
20									
25									
30									
35									
<b>NOTES:</b> 1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA) 2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).			<b>CLIENT:</b> Northeast Civil Solutions <b>SITE:</b> Village at Little Falls 7 to 13 Depot Street South Windham, Maine						
			<b>VIL RESP00655</b> Project No.: 064006      Page: 1						

**BORING LOG:****B106**

Ground Elevation:	See Plan	Total Depth:	5.8 Feet	Logged By:	WAS
GW encountered:	N.O. Feet	Boring Diameter:	6 Inches	Date Drilled:	1/24/07 to 1/24/07
GW @ completion:	N.M. Feet	Well Stickup:	0	Driller:	Northern Test Boring

DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Dark Gray fine SAND, some Silt Olive SILT, trace fine Sand, non- to slightly plastic	dry to moist - ash		SS-1	3,4 7,8	24/21	ML	11	
		moist		SS-2	3,5 7,9	24/20	ML	12	
5	(firm)	moist - rock pieces in sample		SS-3	9,11 14, 50/2"	20/20	ML	25	
	Auger and Split Spoon Refusal - End of Boring @ 5.8'								
10									
15									
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35									

**NOTES:**

1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA)
2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).

**CLIENT:**

Northeast Civil Solutions

**SITE:**

Village at Little Falls  
7 to 13 Depot Street  
South Windham, Maine

**VIL RESP00656**

Project No.:

064006

Page:

1

**BORING LOG:****B107**

Ground Elevation:	See Plan	Total Depth:	2.8 Feet	Logged By:	WAS
GW encountered:	N.O. Feet	Boring Diameter:	6 Inches	Date Drilled:	1/24/07 to 1/24/07
GW @ completion:	N.M. Feet	Well Stickup:	0	Driller:	Northern Test Boring

DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Olive SILT and fine SAND, trace fine Gravel (firm)	dry to moist		SS-1	9,7	24/22	ML	19	
		moist		SS-2	12, 14 12, 50/3"	9/7	ML	>100	
5	Auger and Split Spoon Refusal - End of Boring @ 2.8'								
10									
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**NOTES:**

1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA)
2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).

**CLIENT:**

Northeast Civil Solutions

**SITE:**Village at Little Falls  
7 to 13 Depot Street  
South Windham, Maine**VIL RESP00657**

Project No.:

064006

Page:

1

**BORING LOG:****B108**

Ground Elevation:	See Plan	Total Depth:	1.2 Feet	Logged By:	WAS
GW encountered:	N.O. Feet	Boring Diameter:	6 Inches	Date Drilled:	1/24/07 to 1/24/07
GW @ completion:	N.M. Feet	Well Stickup:	0	Driller:	Northern Test Boring

DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Light Brown SILT and fine SAND	dry to moist - rock fragments		SS-1	3,7 50/2"	14/14	ML	>100	
	Auger and Split Spoon Refusal - End of Boring @ 1.2'								
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**NOTES:**

1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA)
2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).

**CLIENT:**

Northeast Civil Solutions

**SITE:**

Village at Little Falls  
7 to 13 Depot Street  
South Windham, Maine

**VIL RESP00658**

Project No.:

064006

Page:

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**BORING LOG:****B109**

Ground Elevation:	See Plan	Total Depth:	7.5 Feet	Logged By:	WAS
GW encountered:	N.O. Feet	Boring Diameter:	6 Inches	Date Drilled:	1/24/07 to 1/24/07
GW @ completion:	N.M. Feet	Well Stickup:	0	Driller:	Northern Test Boring

DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Brown f-c SAND, some Gravel, trace Silt (firm)	dry to moist		SS-1	18,15 6,5	24/22	SW	21	
5	Olive SILT, some Clay, trace fine Sand, slightly plastic								
	(medium)	moist		SS-2	1,2 4,7	24/24	ML	6	
10	Auger and Split Spoon Refusal - End of Boring @ 7.5'								
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**NOTES:**

1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA)
2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).

**CLIENT:**

Northeast Civil Solutions

**SITE:**

Village at Little Falls  
7 to 13 Depot Street  
South Windham, Maine

**VIL RESP00659**

Project No.:

064006

Page:

1

**BORING LOG:****B110**

Ground Elevation:	See Plan	Total Depth:	5.9 Feet	Logged By:	WAS
GW encountered:	N.O. Feet	Boring Diameter:	6 Inches	Date Drilled:	1/24/07 to 1/24/07
GW @ completion:	N.M. Feet	Well Stickup:	0	Driller:	Northern Test Boring

DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Dark Brown SILT and fine SAND	dry to moist		SS-1	3,2 3,5	24/12	ML	5	
	with trace Gravel/Rock pieces	moist		SS-2	2,4 19,9	24/4	ML	23	
5	(loose to firm)	moist - weathered schist pieces		SS-3	10,7 12, 50/5"	23/20	ML	19	
	Auger and Split Spoon Refusal - End of Boring @ 5.9'								
10									
15									
20									
25									
30									
35									

**NOTES:**

1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA)
2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).

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**SITE:**

Village at Little Falls  
7 to 13 Depot Street  
South Windham, Maine

**VIL RESP00660**

Project No.:

064006

Page:

1



# BORING LOG:

**B111**

Ground Elevation:	See Plan	Total Depth:	5.7 Feet	Logged By:	WAS
GW encountered:	N.O. Feet	Boring Diameter:	6 Inches	Date Drilled:	1/24/07 to 1/24/07
GW @ completion:	N.M. Feet	Well Stickup:	0	Driller:	Northern Test Boring

DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Brown SAND, some Silt	dry to moist - concrete pieces		SS-1	7,6 5,4	24/14	SM	11	
		moist - concrete pieces		SS-2	8,6 4,5 5,7	24/12	SM	10	
5	(loose to firm)	moist - concrete and possible ash pieces		SS-3	11, 50/2"	20/8	SM	18	
	Auger and Split Spoon Refusal - End of Boring @ 5.7'								
10									
15									
20									
25									
30									
35									

## NOTES:

1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA)
2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).

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7 to 13 Depot Street  
South Windham, Maine

**VIL\_RESP00661**

Project No.:

064006

Page:

1

**BORING LOG:****B112**

Ground Elevation:	See Plan	Total Depth:	3.5 Feet	Logged By:	WAS
GW encountered:	N.O. Feet	Boring Diameter:	6 Inches	Date Drilled:	1/24/07 to 1/24/07
GW @ completion:	N.M. Feet	Well Stickup:	0	Driller:	Northern Test Boring

DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Brown f-c SAND, trace to little Silt  (firm)	wet - concrete pieces		SS-1	12, 14 9, 50/3"	21/10	SM	23	
5	Auger Refusal - End of Boring @ 3.5'								
10									
15									
20									
25									
30									
35									

**NOTES:**

1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA)
2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).

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Village at Little Falls  
7 to 13 Depot Street  
South Windham, Maine

**VIL\_RESP00662**

Project No.:

064006

Page:

1



# BORING LOG:

**B113**

Ground Elevation:	See Plan	Total Depth:	16.25 Feet	Logged By:	WAS
GW encountered:	11 Feet	Boring Diameter:	6 Inches	Date Drilled:	1/24/07 to 1/24/07
GW @ completion:	N.M. Feet	Well Stickup:	0	Driller:	Northern Test Boring

DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
5	Rust Brown f-c SAND and f-c GRAVEL, trace Silt becoming Rust Red  (firm to very loose)	dry to moist  moist - red oxide and ash - w = 13.3%  moist - red oxide and ash  moist - coal ash pieces		SS-1	9,10 10,9	24/20	GM- SM	10	
				SS-2	10,9 4,3	24/10	GM- SM	13	
				SS-3	3,1 1,1	24/7	GM- SM	2	
				SS-4	2,1 1,2	24/9	GM- SM	2	
10	Gray fine SAND, some Silt, trace to little organics becoming fine to medium SAND, trace to little Silt (very loose) Gray SILT, some f-m Sand	moist - ash  wet		SS-5	3,1 1,2	24/12	SM	2	
				SS-6	2,2 2,3	24/19	SM	4	
15	(firm to dense) Auger and Split Spoon Refusal - End of Boring @ 16.25'	saturated - rock pieces in sample		SS-7	8,14 50/3"	21/15	ML	>100	
20									
25									
30									
35									

## NOTES:

1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA)
2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).

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Village at Little Falls  
7 to 13 Depot Street  
South Windham, Maine

**VIL RESP00663**

Project No.:

064006

Page:

1



# BORING LOG:

**B114**

Ground Elevation:	See Plan	Total Depth:	33 Feet	Logged By:	WAS
GW encountered:	11 Feet	Boring Diameter:	6 Inches	Date Drilled:	1/24/07 to 1/24/07
GW @ completion:	N.M. Feet	Well Stickup:	0	Driller:	Northern Test Boring

DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Olive Brown f-c SAND, some Silt (firm)	dry to moist		SS-1	5,12 11,7	24/14	SM	23	
	Black to Dark Brown f-c SAND, trace to little Silt	moist		SS-2	5,5 7,5	24/16	SM	12	
5	(loose)	moist		SS-3	2,2 2,2	24/12	SM	4	
	Olive Brown f-m SAND, some Silt	moist - wood pieces		SS-4	2,2 2,3	24/12	SM	4	
10		moist - wood chips and leaves		SS-5	1,1 2,2	24/16	SM	3	
		wet - wood pieces/chips		SS-6	3,4 4,3	24/19	SM	8	
15	(loose)	saturated - large wood pieces		SS-7	3,3 3,3	24/11	SM	6	
20	Blue Gray CLAY, trace Silt, trace fine Sand	wet to saturated		SS-8	1,2 2,1	24/20	CL	4	
25		Su = 930 psf, w = 43.0%		ST-1			CL		
		wet		SS-9	1,1 1,1	24/24	CL	2	
30	(soft)	wet		SS-10	1,1 1,2	24/24	CL	2	
35	Auger Refusal - End of Boring @ 33'								

## NOTES:

1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA)
2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).

## CLIENT:

Northeast Civil Solutions

## SITE:

Village at Little Falls  
7 to 13 Depot Street  
South Windham, Maine

**VIL RESP00664**

Project No.:

064006

Page:

1



# BORING LOG:

**B115**

Ground Elevation:	See Plan	Total Depth:	20.8 Feet	Logged By:	WAS
GW encountered:	8 Feet	Boring Diameter:	6 Inches	Date Drilled:	1/24/07 to 1/24/07
GW @ completion:	N.M. Feet	Well Stickup:	0	Driller:	Northern Test Boring

DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Black to Dark Brown f-c SAND, some Gravel, trace to little Silt	dry to moist - ash and coal pieces		SS-1	22,18 7,3	24/18	SM	25	
		moist - ash and coal pieces		SS-2	2,2 1,2	24/8	SM	3	
5		moist - ash and coal pieces		SS-3	2,1 2,2	24/10	SM	3	
		moist to wet - brick pieces		SS-4	3,4 2,3	24/8	SM	6	
	(very loose to loose)	saturated - brick pieces		SS-5	2,2 1,1	24/6	SM	3	
10	Gray fibrous organic SILT, trace fine Sand	saturated - 5.8% organics, w = 52.9%		SS-6	2,2 2,7	24/8	SM-OL	4	
	(loose)								
	Gray f-c SAND, little Silt								
15		saturated, wood and timber pieces		SS-7	2,3 4,5	24/17	SM	7	
	(loose)								
	Gray CLAY, some Silt, plastic								
20	(soft)	saturated - rock pieces		SS-8	4, 50/3"	9/4	ML	>100	
	Auger and Split Spoon Refusal - End of Boring @ 20.8'								
25									
30									
35									

## NOTES:

1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA)
2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).

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7 to 13 Depot Street  
South Windham, Maine

**VIL RESP00665**

Project No.:

064006

Page:

1

**BORING LOG:****B116**

Ground Elevation:	See Plan	Total Depth:	3.8 Feet	Logged By:	WAS
GW encountered:	N.O. Feet	Boring Diameter:	6 Inches	Date Drilled:	1/24/07 to 1/24/07
GW @ completion:	N.M. Feet	Well Stickup:	0	Driller:	Northern Test Boring

DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Dark Brown to Black f-c SAND, little SILT	dry to moist - brick pieces		SS-1	3,3	24/14	SM	7	
	(loose)	moist - brick pieces		SS-2	4,4 3,5 50/3"	15/5	SM	>100	
5	Auger Refusal - End of Boring @ 3.8'								
10									
15									
20									
25									
30									
35									

**NOTES:**

1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA)
2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).

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Village at Little Falls  
7 to 13 Depot Street  
South Windham, Maine


**VIL\_RESP00666**

Project No.:

064006

Page:

1

		BORING LOG: B117							
Ground Elevation:		See Plan	Total Depth:		18 Feet	Logged By:		WAS	
GW encountered:		9 Feet	Boring Diameter:		6 Inches	Date Drilled: 1/24/07 to 1/24/07			
GW @ completion:		N.M. Feet	Well Stickup:		0	Driller: Northern Test Boring			
DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/RECOVERY (in.)	USCS SYMBOL	N	WELL
5	Gray to Brown f-c SAND, some fine Gravel, some Silt	dry to moist		SS-1	17,15 5,3	24/18	SM	20	
		moist, with ash - w = 6.1%		SS-2	3,3 5,3	24/14	SM	8	
		moist - ash		SS-3	9,11 7,23	24/8	SM	18	
		moist - ash		SS-4	5,6 5,5	24/7	SM	11	
		wet - ash		SS-5	3,4 4,4	24/3	SM	8	
		saturated - ash		SS-6	5,5 7,5	24/3	SM	12	
10	becoming dark gray to black								
	(loose to firm)								
15	Olive to Blue CLAY, some Silt, plastic								
	(stiff)								
20	Auger Refusal - End of Boring @ 18'								
25									
30									
35									

<b>NOTES:</b> 1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA) 2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).	<b>CLIENT:</b> Northeast Civil Solutions
	<b>SITE:</b> Village at Little Falls 7 to 13 Depot Street South Windham, Maine
	<b>PROJECT NO.:</b> 064006 <b>PAGE:</b> 1

**VIL\_RESP00667**

**BORING LOG:****B118**

Ground Elevation:	See Plan	Total Depth:	22 Feet	Logged By:	WAS
GW encountered:	11 Feet	Boring Diameter:	6 Inches	Date Drilled:	1/24/07 to 1/24/07
GW @ completion:	N.M. Feet	Well Stickup:	0	Driller:	Northern Test Boring

DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Gray f-m SAND, little Silt, little Gravel	dry to moist		SS-1	15,12 9,11	24/11	SM	21	
	becoming Black m-c SAND	moist		SS-2	9,17 29,23	24/14	SM	46	
5		moist		SS-3	9,8 21, 50/4"	22/15	SM	29	
10	becoming some fine silt	moist - concrete pieces		SS-4	10,17 10,12	24/17	SM	27	
15		wet		SS-5	21,12 11,12	24/1	SM	23	
20	(firm to dense)			SS-6	12,21 27,31	24/0	SM	48	
	Auger Refusal - End of Boring @ 22'								
25									
30									
35									

**NOTES:**

1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA)
2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).

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Village at Little Falls  
7 to 13 Depot Street  
South Windham, Maine

**FILE RESP00668**

Project No.: 064006

Page:

1



# BORING LOG:

**B119**

Ground Elevation:	See Plan	Total Depth:	18 Feet	Logged By:	WAS
GW encountered:	11 Feet	Boring Diameter:	6 Inches	Date Drilled:	1/24/07 to 1/24/07
GW @ completion:	N.M. Feet	Well Stickup:	0	Driller:	Northern Test Boring

DEPTH	DESCRIPTION	REMARKS	SAMPLE	SAMPLE NUMBER	BLOW COUNTS (per 6 inches)	PENETRATION/ RECOVERY (in.)	USCS SYMBOL	N	WELL
	Gray f-m SAND, little Silt, little Gravel	dry to moist		SS-1	12,16 18,11	24/14	SM	34	
	becoming Dark Brown to Black m-c SAND	moist		SS-2	8,5 20,25	24/12	SM	25	
5		moist		SS-3	7,17 21,14	24/18	SM	38	
10	(loose to firm)	wet		SS-4	10,15 15,18	24/17	ML	30	
	Olive Silt, little Clay, trace fine Sand								
15		wet		SS-5	19,13 11,12	24/13	ML	24	
	(medium to stiff)								
	Auger Refusal - End of Boring @ 18'								
20									
25									
30									
35									

## NOTES:

1. Drilling Method: Track mounted Diedrich D-50 with 2-1/4" i.d. Hollow Stem Auger (HSA)
2. Soil Sampling: 2-inch Split Spoon Sampler driven with 140 lb. hammer falling 30 inches (Auto-Hammer).

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Village at Little Falls  
7 to 13 Depot Street  
South Windham, Maine

**VIL\_RESP00669**

Project No.: 064006

Page: 1



ENGINEERS

Civil Engineers &amp; Land Surveyors

## TEST PIT LOG

Project: Geotechnical Investigation		Project No. 064006	
TEST PIT IDENTIFICATION: TP101			
Location: 12 Depot St, S. Windham, Maine		Ground Elevation:	
Client:		Datum: NA	
Contractor: ESN North Atlantic		Operator: Justin Berger	
Equipment: Bobcat 442 Tracked Excavator		Samples Collected <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Capacity/Reach: 1/2 cubic yard, 16'		Time Started:	Time Completed:
Weather: 35 F, cloudy			
Logged by ALB		Date: 2/21/2006	
Checked by:		Date:	
TEST PIT INFORMATION			
Depth of Stratum Change (feet)	Sample No. and Type	Sample Depth (feet)	Soil Description
0-0.5			Topsoil, organics
0.5 - 3'			Dark Brown/Black f-m SAND, little Silt, cobbles
3 - 4.5'			Grayish Brown Clayey Silt
4.5'			Refusal on Bedrock @ 4.5' groundwater encountered at 3' bgs (adjacent to creek)
Pit Dimensions (Ft.) Length: <u>6</u> Width: <u>2.5</u> Depth: <u>4.5</u>			Remarks: 1) Composite sample submitted to for analysis. 2) Test pit backfilled with native material.

VIL\_RESP00670